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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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| 09/823,802 | 03/30/2001 | Gautam Dewan | 004073.P015 | 7405 |

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EXAMINER

HO, DUC CHI

ART UNIT PAPER NUMBER

2616

DATE MAILED: 08/09/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/823,802

Applicant(s)

DEWAN ET AL.

Examiner

Duc C. Ho

Art Unit

2616

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 02 June 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-35 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 26-35 is/are allowed.
- 6) ☒ Claim(s) 1,2,7,8,13-19, and 21-25 is/are rejected.
- 7) ☒ Claim(s) 3-6,9-12,17-20 and 22 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

Allowable Subject Matter

1. The indicated allowability of claim 16-19, and 22 are withdrawn in view of the newly discovered reference(s) to Muller et al.(US 6,453,360); Steiss (US 6,895,494).

Rejections based on the newly cited reference(s) follow.

Claim Objections

2. Claim 17 is objected to because of the following informalities: "content"-line 3 should be changed to --- constant ---. (see 0045, 0048).

Appropriate correction is required.

Claim Rejections - 35 USC § 101

35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

3. Claims 21-25 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter. The claimed subject matter "A computer program embodied on computer readable medium for controlling a micro-controller" directed toward a software program per se. Since a computer program is merely a set of instructions capable of being executed by a computer, the computer program itself is not a process. In contest, a claimed computer-readable medium encoded with a data structure defines structural and functional interrelationships between the data structure

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and the computer software and hardware components which permit the data structure's functionality to be realized, and is thus statutory.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains.

Patentability shall not be negated by the manner in which the invention was made.

5. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103© and potential 35 U.S.C. 102(f) or (g) prior art under 35 U.S.C. 103(a).

6. Claims 1-2, 7-8, 13-19, and 21-25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Muller et al. (US 6,453,360), hereinafter referred to as Muller, in view of Steiss et al. (US 6,895,494), hereinafter referred to as Steiss.

Regarding claim 1, Muller discloses high performance network interface. In Muller the header parser 106-fig.3 is equivalent to the claimed limitation micro-controller. Instructions stored in instruction memory 306-fig.3 having a plurality of instruction fields-fig.23, wherein each instruction field related to a specific operation for

parsing a packet, see col. 15, lines 33-62, col. 27, lines 28-32, and col. 30-line 20 to col. 34-line 55.

Muller, however, does not expressly disclose processing the plurality of instruction fields in parallel.

One skill in the art would recognize the advantage of having a plurality of processors for processing a plurality of instruction fields in parallel such that many functions for parsing a packet could be processed simultaneously in order to determined if the packet's compatibility with, or conformance to, one or more pre-selected protocols.

Steiss discloses sub-pipelined and pipelined execution in a VLIW. In Steiss Very Long Instruction Word (VLIW) processors are viewed as an attractive way of achieving instruction-level parallelism, see col.1-line11 to col.2-line 56.

At the time of the invention, it would have been obvious to a person of ordinary skill in the art to combine Muller with Steiss.

The suggestion/motivation for doing so would have been to increase efficiency for parsing a packet so that an incoming packet could be processed simultaneously via instructions in order to determined if the packet's compatibility with, or conformance to, one or more pre-selected protocols.

Therefore, it would have been obvious to combine Muller with Steiss to obtain the invention as specified in claim 1.

Regarding claim 2, in Muller the packet includes one or more protocol headers.

Regarding claims 7-8, these claims have similar limitations as claims 1-2.

Therefore, they are rejected under Muller-Steiss for the same reasons set forth in the rejection of claims 1-2.

Regarding claim 13, in Muller the header parser 106-fig.3 is a system on a chip.

Regarding claim 14, in Muller the memory 16-fig.3 stores data used in forming packets.

Regarding claim 15, Steiss discloses the VLIW architecture in which the instructions of Muller are based on.

Regarding claim 16, this claim has similar limitations as claim 1. Therefore, it is rejected under Muller-Steiss for the same reasons set forth in the rejection of claim 1.

Regarding claim 17, in Steiss the register set should include a checksum register.

Regarding claim 18, in Muller the operation should include a memory load and store operation.

Regarding claim 19, in Muller one of the execution units should be capable of performing the checksum operation.

Regarding claim 21, this claim has similar limitations as claim 1. Therefore, it is rejected under Muller-Steiss for the same reasons set forth in the rejection of claim 1.

Regarding claim 22, this claim has similar limitations as claim 18. Therefore, it is rejected under Muller-Steiss for the same reasons set forth in the rejection of claim 18.

Regarding claim 23, in Muller, each operation field-fig.23 is associated with a set of micro -instructions.

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Regarding claim 24, in Muller the instruction is executed in a plurality of stages.

Regarding claim 25, in Muller, in the instruction, the stages should include a pre-fetch stage, fetch stage, decode stage, and an executed stage.

Allowable Subject Matter

7. Claims 26-35 are allowed.
8. Claims 3-6, 9-12, and 20 are objected to as being independent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Duc Ho whose telephone number is (571) 272-3147. The examiner can normally be reached on Monday through Friday from 7:00 am to 3:30 pm.

If attempt to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Wellington Chin, can be reached on (571) 272-3134.

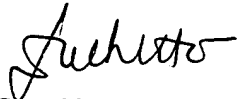
Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (571) 272-2600.

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The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

10. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Patent Examiner



Duc Ho

07-25-06
